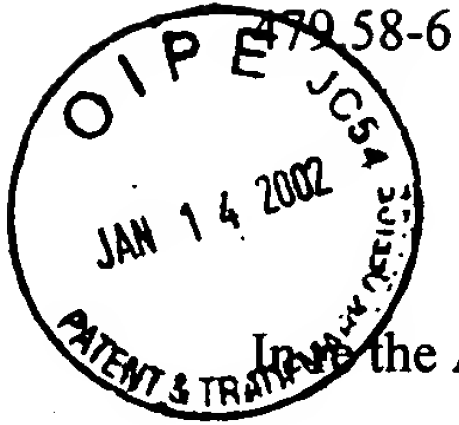


COPY OF PAPERS
ORIGINALLY FILED

1647-
#4
PATENT
UC #89-053-6



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of)

NAPOLEONE FERRARA, DENIS)
GOSPODAROWICZ and JEAN PLOUET)

Serial No: 09/929,770)

Filed: August 14, 2001)

For: ENDOTHELIAL CELL GROWTH)
FACTOR, METHODS OF ISOLATION)
AND EXPRESSION)

) Group Art Unit: 1647

) Prior Examiner: Lorraine Spector

Box IDS
Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED

JAN 17 2001

TECH CENTER 1600/2900

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Box IDS, Assistant Commissioner for Patents, Washington, D.C. 20231 on November 7, 2001.

Howard M. Peters (Reg. No. 29,202)

TRANSMITTAL LETTER

Sir:

Transmitted herewith are the following documents:

1. Transmittal Letter (2 pgs.) in duplicate;
2. Transmittal of Information Disclosure Statement (2 pgs.) in duplicate; and
3. Postcard.

The enclosed are copies of IDS and PTO 1449 forms filed in parent application for the past 12 years. See Serial No. 08/473,276.

If additional fees are due, the Commissioner is hereby authorized to charge such fees or to credit any overpayment to Deposit Account No. 16-1331.

Respectfully submitted,

Date: November 7, 2001



Howard M. Peters (Reg. No. 29,202)
Attorney of Record
PETERS, VERNY, JONES & BIKŠA, LLP
385 Sherman Avenue, Suite 6
Palo Alto, CA 94306
Telephone: (650) 324-1677
Facsimile: (650) 324-1678
Attorney Docket No. 479.58-6 (HMP)

| | | | |
|---|--------------------------------|---|------------------------|
| TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c)) | | | Docket No. 479.58-6 |
| In Re Application Of: NAPOLEONE FERRARA, DENIS GOSPODAROWICZ and JEAN PLOUET | | | |
| Serial No. 09/929,770 | Filing Date August 14, 2001 | Examiner Lorraine Spector | Group Art Unit 1647 |
| ENDOTHELIAL CELL GROWTH FACTOR, METHODS OF ISOLATION AND EXPRESSION | | | |
| Address to: Assistant Commissioner for Patents Washington, D.C. 20231 | | RECEIVED JAN 17 2001 TECH CENTER 1600/2900 | |
| 37 CFR 1.97(b) | | | |
| 1. <input checked="" type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114. | | | |
| 37 CFR 1.97(c) | | | |
| 2. <input type="checkbox"/> The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of: | | | |
| <input type="checkbox"/> the statement specified in 37 CFR 1.97(e); | | | |
| OR | | | |
| <input type="checkbox"/> the fee set forth in 37 CFR 1.17(p). | | | |

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.
479.58-6

In Re Application: **NAPOLEONE FERRARA, DENIS GOSPODAROWICZ and JEAN PLOUET**

Serial No.
29,770

Filing Date
August 14, 2001

Examiner
Lorraine Spector

Group Art Unit
1647

ENDOTHELIAL CELL GROWTH FACTOR, METHODS OF ISOLATION AND EXPRESSION

RECEIVED

JAN 17 2001

Payment of Fee

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(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of _____ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 16-1331 as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of _____
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

Certificate of Transmission by Facsimile*

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (F _____)

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Nov. 7, 2001 with the U.S. Postal Service
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Howard M. Peters

Signature of Person Mailing Correspondence

Howard M. Peters (Reg. No. 29,202)

Typed or Printed Name of Person Mailing Certificate

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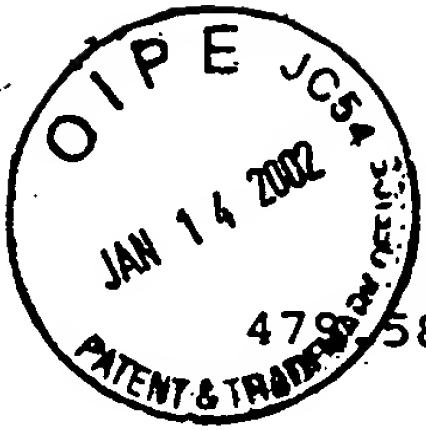
Howard M. Peters

Signature

Dated: November 7, 2001

Howard M. Peters (Reg. No. 29,202)
PETERS, VERNY, JONES & BIKSA, LLP
385 Sherman Avenue, Suite 6
Palo Alto, CA 94306
Telephone No.: (650) 324-1677
Fax No.: (650) 324-1678

cc:



COPY OF PAPERS
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PATENT
U.C. # 89-053-3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of)
)
NAPOLEONE FERRARA, DENIS)
GOSPODAROWICZ and JEAN PLOUET)
)
Serial No.: 360,235) Group Art Unit: 186
)
Filed: June 1, 1989) Examiner: S. Guest
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For: ENDOTHELIAL CELL GROWTH)
FACTOR, METHODS OF ISOLA-)
TION AND EXPRESSION)
)

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231 on April 30, 1992.

Howard M. Peters (Reg No. 29,202)

INFORMATION DISCLOSURE STATEMENT SUPPLEMENTAL
37 C.F.R. 1.56 AND 1.97

Sir:

The citations below (copies below), which recently came to the attention of Applicants' attorney, may be material to the examination of the above-identified application and are, therefore, submitted in compliance with the duty of disclosure in 37 C.F.R. 1.56 and 1.97.

A number of these references were published after the filing date of the present or a parent patent application.

The Examiner is requested to make these citations of official record in this application.

1. G. Beck et al., "Isolation and Characterization of A Vascular Permeability Factor from Stimulated U937 Cells," J. Leukocyte Biol., Vol. 42:5 (1987) p. 568, is an abstract describing the isolation of a vascular permeability factor (VPF) isolated from macrophage cell line U937.

2. J. N. Bruce et al., "Vascular permeability induced by protein product of malignant brain tumors: inhibition by dexamethasone," J. Neurosurg., Vol 67 (1987), pp. 880-884 describe an activity caused by a vascular permeability factor (VPF) found in conditioned medium from cultures of malignant human astroglial (brain) tumors. No sequence data are given for the factor.

3. G. R. Criscuolo et al., "Further characterization of malignant glioma-derived vascular permeability factor," J. Neurosurg., Vol. 69 (1988), pp. 254-262 describe the VPF referred to in Ref. 2 above. The factor was purified 1000 fold and postulated to have a molecular weight of 42-56 kD. No sequence data is disclosed.

4. D. Gospodarowicz et al., "Isolation and characterization of a vascular endothelial cell mitogen produced by pituitary-derived folliculo stellate cells," Proc. Nat. Acad. Sci., Vol. 86 (1989), pp. 7311-7315, published after the effective filing date of

the present application, describes work done by one of the inventors on the presently claimed FSdGF. An N-terminal sequence of the factor is given.

5. J. Plouet et al., "Isolation and characterization of a newly identified endothelial cell mitogen produced by AtT-20 cells," EMBO J., Vol. 8:12 (1989), pp. 3801-3806, published after the effective filing date of the present application describes a human vascular permeability factor, termed hVPF; the N-terminal sequence of HVPF is disclosed. The sequence was found to be similar to the sequence of guinea pig VPF.

6. G. Conn et al., "Purification of a glycoprotein vascular endothelial cell mitogen from a rat glioma-derived cell line," Proc. Nat. Acad. Sci. USA, Vol. 87 (1990), pp. 1323-1327, published after the effective filing date of the present application, describes the purification of a glioma-derived vascular endothelial growth factor (GD-VEFG). An amino acid composition, but not a sequence, is disclosed. The authors state that the disclosed proteins may--or may not--be equivalent to the protein disclosed by Ferrara et al., which is presumptively the presently claimed VEGF.

7. G. Conn, "Amino acid and cDNA sequences of a vascular endothelial cell mitogen that is homologous to platelet-derived growth factor," Proc. Nat. Acad. Sci. USA, Vol. 87 (1990), pp. 2628-2632, published after the effective filing date of the present application, discloses the complete sequence of the GD-VEGF disclosed in Ref. 6 herein. Homology to platelet derived growth

factor (PDGF) is reported. The paper reports that the sequence of GD-VEGF is 90% similar to a recently reported VEGF sequence, and VEGF sequence (presumably derived from work on the presently claimed protein) is identical to the sequence of VPF.

8. D. R. Senger et al., "Purification and NH₂-Terminal Amino Acid Sequence of Guinea Pig Tumor-secreted Vascular Permeability Factor," Cancer Res., Vol. 50 (1990), pp. 1774-1778, published after the effective date of the present application, disclose an N-terminal sequence of guinea pig VPF. No similarity between this sequence and previously reported sequences (in the PIR/NBRF sequence database) was found. A note added in the proof cites the work of others relating to VEGF, but no disclosure is made regarding similarity or dissimilarity between VEGF and VPF. The disclosed sequence is not identical to the sequence presently claimed, although visual inspection reveals some similarities between the two sequences.

9. N. Ferrara et al., "The Vascular Endothelial Growth Factor Family of Polypeptides," J. Cell. Biochem., Vol. 47 (1991), pp. 211-218, published after the effective filing date of the present application, is a review of the vascular endothelial growth factors family of polypeptides. The existence of four species of VEGF polypeptides is disclosed.

10. C. de Vries et al., "The fms-Like Tyrosine Kinase, a Receptor for Vascular Endothelial Growth Factor," Science, Vol. 255 (1992), pp. 989-991, published after the effective filing date of

479.58-3

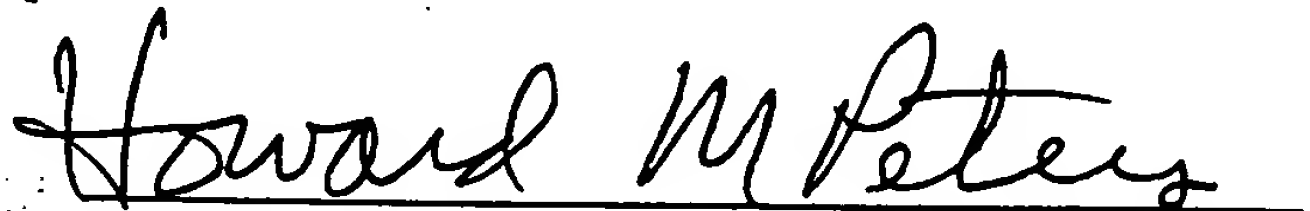
PATENT
U.C. # 89-053-3

the present application is directed to a receptor for VEGF. An introductory portion of the reference discloses the identity of VPF and VEGF sequences.

This Information Disclosure Statement under 37 C.F.R. and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

If the Examiner has any questions regarding the cited art, she is encouraged to call the undersigned attorney (collect) at (415) 421-2674.

Respectfully submitted,



Howard M. Peters (Reg. No. 29,202)

for

PHILLIPS, MOORE, LEMPPIO & FINLEY
177 Post Street, Suite 800
San Francisco, California 94108
Attorneys for Applicant

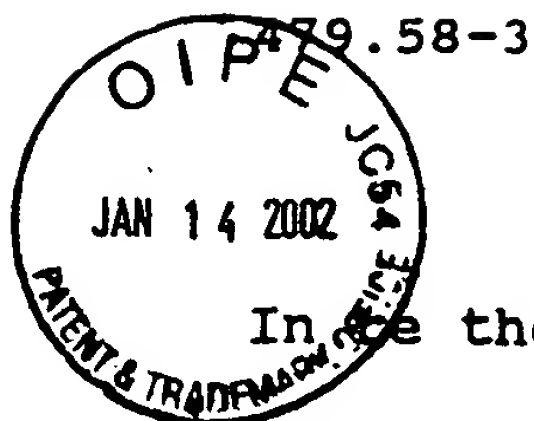
HMP:cl/kw

Tel: (415) 421-2674

Fax: (415) 421-1663

Enclosures: As listed above

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PATENT
U.C. # 89-053-3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of

NAPOLEONE FERRARA, DENIS
GOSPODAROWICZ and JEAN PLOUET

Serial No.: 360,235

Filed: June 1, 1989

For: ENDOTHELIAL CELL GROWTH
FACTOR, METHODS OF ISOLA-
TION AND EXPRESSION

)
) Group 180

)
) Group Art Unit: 186

)
) Examiner: S. Guest

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 on June 18, 1991.

Howard M. Peters
Howard M. Peters (Reg. No. 29,202)

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. 1.56 AND 1.97

Sir:

The citations below, copies attached, may be material to the examination of the above-identified application and are, therefore, submitted in compliance with the duty of disclosure in 37 C.F.R. 1.56 and 1.97.

The Examiner is requested to make these citations of official record in this application.

1. D.T. Connolly et al., U.S. Patent 5,008,196, issued April

479.58-3

PATENT
U.C. # 89-053-3

16, 1991, class 435/240.2.

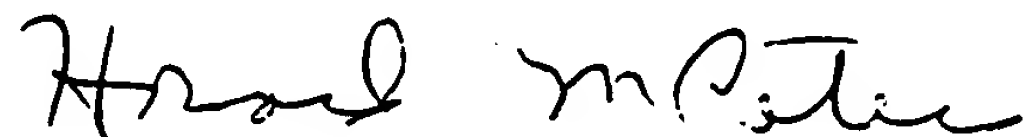
2. California Biotechnology, Inc., International Publ. No. WO 91/02058, published 21 February 1991, PCT/US90/04227, filed 27 July 1990.

3. Edmund Tischer et al., "Vascular Endothelial Growth Factor: A New Member of the Platelet-Derived Growth Factor Gen Family," Biochemical & Biophysical Research Communications, Vol. 165 (3), pp. 1198-1206.

This Information Disclosure Statement under 37 C.F.R. and 1.97 is not to be construed as a representation that a search has been made, that additional information material to any examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

If the Examiner has any questions regarding the cited Art, she is encouraged to call the undersigned attorney (collect) at (415) 421-2674.

Respectfully submitted,



Howard M. Peters (Reg. No. 29,202)
for
PHILLIPS, MOORE, LEMPPIO & FINLEY
177 Post Street, Ste. 800
San Francisco, CA 94108
Attorneys for Applicants

HMP:cl
(415) 421-2674



58-3

COPY OF PAPERS
ORIGINAL FILEDPATENT
U.C. # 89-053-3IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re the Application of

NAPOLEONE FERRARA, DENIS
GOSPODAROWICZ and JEAN PLOUET

Serial No.: 360,235

Filed: June 1, 1989

For: ENDOTHELIAL CELL GROWTH
FACTOR, METHODS OF ISOLA-
TION AND EXPRESSION

Group 180

Group Art Unit: 186

Examiner: S. Guest

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 on October 25, 1990.

Howard M. Peters (Reg. No. 29,202)

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.56 AND 1.97

Sir:

The citations below, copies attached, may be material to the examination of the above-identified application and are, therefore, submitted in compliance with the duty of disclosure in 37 C.F.R. 1.56 and 1.97.

The Examiner is requested to make these citations of official record in this application.

1. H.F. Dvorak, et al., U.S. Patent 4,456,550, issued June 26, 1984, class 260/112R.

2. European Patent Application Publication 0370,989, published May 30, 1990, class C12N 15/12.

3. H.F. Dvorak, et al. WO 84/02135, PCT, published June 7,

1984, Int. Class C07G 7/00.

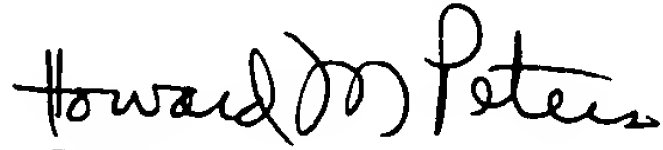
4. D.W. Leung, et al., "Vascular Endothelial Growth Factor Is a Secreted Angiogenic Mitogen", Science, Vol. 246, p. 1306 (December 8, 1989).
5. P.J. Keck, et al., "Vascular Permeability Factor, an Endothelial Cell Mitogen Related to PDGF", Science, Vol. 246, p. 1309, (December 8, 1989).
6. G.E. Lemke, et al., "Identification and Purification of Glial Growth Factor¹", Journal of Neuroscience, Vol. 4, No. 1, p. 75 (January 1984).
7. N. Ferrara, et al., "Pituitary Follicular Cells Secrete a Novel Heparin-Binding Growth Factor Specific for Vascular Endothelial Cells", Biochemical and Biophysical Research Communications Vol. 161, No. 2, p. 851, (June 15, 1989).
8. D. Gospodarowicz, et al., "Isolation and Characterization of a Vascular Endothelial Cell Mitogen Produced by Pituitary Derived Folliculo Stellate Cells", Biochemistry, Vol. 86 p. 882 (1989).
9. D. Gospodarowicz, et al., "Pituitary Follicular Cells Secrete Both Vascular Endothelial Cell Growth Factor and Follistatin" as submitted earlier to related U.S. Patent Application Serial No. 07/346,169 filed May 2, 1990.
10. N. Ling, et al., "Isolation and partial characterization of a M_r 32,000 protein with inhibin activity from porcine follicular fluid", Biochemistry, Vol. 82, p. 7217 (November 1985).
11. N. Ueno, et al., "Isolation and partial characterization of follistatin: A single-chain M_r 35,000 monomeric protein that inhibits the release of follicle-stimulating hormone", Biochemistry, Vol. 84, p. 8282 (December 1987).
12. S. Shimasaki, et al., "Porcine Follistatin Gene Structure Supports Two Forms of Mature Follistatin Produced by Alternative

479.58-3

PATENT
U.C. # 89-053-3

If the Examiner has any questions regarding the cited Art, she is encouraged to call the undersigned attorney (collect) at (415) 421-2674.

Respectfully submitted,



Howard M. Peters (Reg. No. 29,202)
for
PHILLIPS, MOORE, LEMPPIO & FINLEY
177 Post Street, Ste. 800
San Francisco, CA 94108
(415) 421-2674
Attorneys for Applicant

HMP:cal
A:479-58.3/disclosure

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FORM PTO-1449 (Modified)

**LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

479.58-3

SERIAL NO.

O/ 360,235

APPLICANT

N. FERRARA et al.

FILING DATE

6/1/89

GROUP

186

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|----|-----------------|---------|-----------------|-----------|----------|-------------------------------|
| | AA | 5 0 0 8 19 6 | 4/16/91 | Connolly et al. | 435/240.2 | | |
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FOREIGN PATENT DOCUMENTS

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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| | AR | Edmund Tischer et al., "Vascular Endothelial Growth Factor: A New Member of the Platelet-Derived Growth Factor Gene Family," Biochemical & Biophysical Research Communications, Vol.165(3), pp. 1198-1206. |
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EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FOR PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANTS INFORMATION DISCLOSURE
STATEMENT

ATTY. DOCKET NO.

479.58-3

SERIAL NO.

of 360,235

APPLICANT Napoleone Ferrara, et al.

FILING DATE June 1, 1989

GROUP

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | | | | | | | | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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| | | 4 | 6 | 7 | 0 | 3 | 9 | 4 | 6/2/87 | H.B. POLLARD et al | 435 | 240 | Nov 16, 19 |
| | | 4 | 8 | 0 | 1 | 5 | 4 | 2 | 1/31/89 | M.J. MURRAY et al | 435 | 172.3 | Feb 25, 19 |
| | | 4 | 7 | 3 | 8 | 9 | 2 | 7 | 4/19/88 | T, TANIGUCHI et al | 435 | 243 | Feb 3, 19 |
| | | 4 | 7 | 8 | 3 | 4 | 1 | 2 | 11/8/88 | G.I. BELL, et al | 435 | 240.1 | Jun 3, 19 |
| | | 4 | 7 | 2 | 1 | 6 | 7 | 2 | 1/26/88 | B.L. VALLEE, et al | 435 | 70 | Sep 20 19 |
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DATE CONSIDERED

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**LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANT'S INFORMATION DISCLOSURE
STATEMENT**

(Use several sheets if necessary)

ATTY. DOCKET NO. 479.58-3

SERIAL NO.

0/360,235

APPLICANT NAPOLEONE FERRARA, et al.

FILING DATE June 1, 1989

GROUP 186

REFERENCE DISCLOSURE

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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**ART (Including Author, Title, Date, Pertinent Pages,
Etc.)**

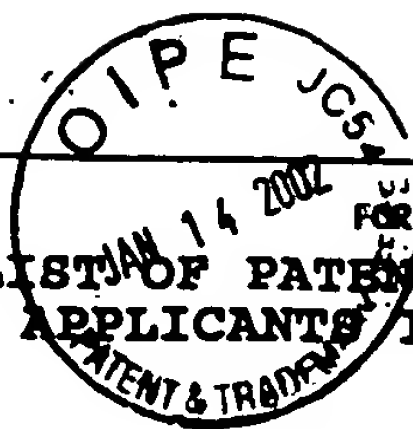
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| J | 1 | G. Beck et al., "Isolation and Characterization of a Vascular Permeability Factor from Stimulated U937 Cells", J. Leukocyte Bio. Vol. 42:5 (1987), p. 568. |
| K | 2 | J.N. Bruce et al., "Vascular Permeability induced by protein product of malignant brain tumors: inhibition by dexamethasone", J. Neurosurg., Vol. 67 (1987), pp. 880-884. |
| L | 3 | G.R. Criscuolo et al., "Further characterization of malignant glioma-derived vascular permeability factor", J. Neurosurg., Vol. 69 (1988), pp. 254-262. |
| M | 4 | G. Gospodarowicz et al., "Isolation and characterization of a vascular endothelial cell mitogen produced by pituitary-derived folliculo stellate cells", Proc. Nat. Acad. Sci., Vol. 86 (1989), pp. 7311-7315. |
| N | 5 | J. Plouet et al., "Isolation and characterization of a newly identified endothelial cell mitogen produced by AtT-20 cells", EMBO J., Vol. 8:12 (1989), pp. 3801-3806. |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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FOR PTO-1449 (Modified)
**LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANTS' INFORMATION DISCLOSURE
STATEMENT**

(Use several sheets if necessary)

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SERIAL NO.

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APPLICANT NAPOLEONE FERRARA, et al.

FILING DATE June 1, 1989

GROUP 186

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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FOREIGN PATENT DOCUMENTS

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479.58-3

SERIAL NO.
360,235

APPLICANT
NAPOLEONE FERRARA ET AL.

FILING DATE
June 1, 1989

GROUP
186

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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(Information Disclosure Statement—Section 9 PTO-1449 (Modified) (6-11) page 1 of 6



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GROUP
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REFERENCE DESIGNATION

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